

1 **WHAT IS CLAIMED IS:**

2 1. An unlocking apparatus for a lock having a keyhole, the unlocking
3 apparatus comprising:

4 an emitting member adapted to be mounted at a side of the keyhole of
5 the lock, the emitting member having a plurality of illuminants adapted to be
6 arranged along the keyhole;

7 a receiving member adapted to be mounted at a side of the keyhole and
8 facing the emitting member, the receiving member having a receiver for
9 identification of color; and

10 a key having a shank for inserting in the keyhole, and a plurality of
11 transparent colored plugs respectively mounted in the shank and aligned with the
12 illuminants when the shank is inserted in the keyhole.

13 2. The unlocking apparatus as claimed in claim 1, wherein the receiving
14 member further has a plurality of optical fibers each with a first end in alignment
15 with one of the illuminants and a second end connected with the receiver.

16 3. The unlocking apparatus as claimed in claim 2, wherein the
17 illuminants are mounted on a first positioning strips, and the first ends of the
18 optical fibers are mounted on a second positioning strip facing the illuminants.

19 4. An unlocking apparatus for a lock having a keyhole, and the
20 unlocking apparatus comprising:

21 a plurality of illuminants adapted to be mounted at a side of the keyhole
22 of the lock;

23 a plurality of optical fibers respectively mounted beside the illuminants
24 and connected with a receiver for identification of color; and

1 a key having a shank for inserting in the keyhole, and a plurality of
2 reflective colored plugs respectively mounted in the shank and aligned with the
3 illuminants and the optical fibers when the shank is inserted in the keyhole.

4 5. The unlocking apparatus as claimed in claim 4, wherein the
5 illuminants and the optical fibers are mounted on a positioning strip.

6 6. An unlocking method by identification of colored light rays
7 comprising the steps:

8 initially inserting an original key with transparent colored plugs in a
9 keyhole of a lock;

10 white light rays being given off from an emitting member and passing
11 through the transparent colored plugs;

12 receiving the light rays through the transparent colored plugs into a
13 receiver, and storing the color arrangement of the light rays;

14 inserting a key in the keyhole for unlocking while white light rays are
15 being given off from the emitting member and passing through transparent
16 colored plugs of this key;

17 receiving the colored light rays into the receiver; and

18 comparing the color arrangement of the key with the stored arrangement
19 to identify the key.

20 7. An unlocking method by identification of colored light rays
21 comprising the steps:

22 initially inserting an original key with reflective colored plugs in a
23 keyhole of a lock;

24 white light rays being given off from an emitting member and reflected

1 by reflective colored plugs;
2 receiving the light rays from the reflective colored plugs by optical
3 fibers and transferring into a receiver, and storing the color arrangement of the
4 light rays;
5 inserting a key in the keyhole for unlocking while white light rays are
6 being given off from the emitting member and reflected by reflective colored
7 plugs of this key;
8 receiving the colored light rays by the optical fibers and transferring into
9 the receiver; and
10 comparing the color arrangement of the key with the stored arrangement
11 to identify the key.